REMARKS

The prior Office Action noted claims 12, 19 and 30 as allowable and although Applicants disagreed with the remaining rejections, Applicants amended the claims into an allowable format to expedite issuance of the allowed claims. However, in the current Office Action, the Examiner reversed his decision and rejected all claims. In view of this decision, Applicants has amended the claims to undo the prior amendment in order to address Simske in depth.

Simske relates to a system and method for computerized searching for desired information from a corpus of information are provided. A query for desired information is received by a synonymic search application, and the application also receives input tuning the amount of synonymic broadening to be applied to the received query for constructing a synonymic search query to be utilized for searching for the desired information.

The Office noted that Simske's paragraph 66 shows claim 1's receiving a first set of expanded results generated from one or more results of a first query concept by utilizing one or more data sources and receiving a second set of expanded results generated from one or more results of a second query concept by utilizing the one or more data sources. Applicants traverse this comparison. Paragraph 66 recites:

> [0066] To further aid a user in effectively searching a corpus of information for desired information, recent proposals have been made to use synonymic searching. For instance, electronic thesaurus applications are known (such as those commonly included in word processor applications), and such electronic thesaurus applications may be utilized to determine synonyms for one or more words used in a user-constructed search query. Accordingly, a synonymic search query may be constructed that searches for not only the user-constructed query terms, but also for synonyms of one or more of such terms.

However, Paragraph 66 does not show receiving a first set of expanded results generated from one or more results of a first query concept by utilizing one or more data sources and receiving a second set of expanded results generated from one or more results of a second query concept by utilizing the one or more data sources. This is discussed in more details in Simske's paragraph 67, reproduced below:

> [0067] For instance, a synonymic search application may construct a synonymic

search query that includes a user-input search query and also includes one or more other queries in which one or more of the terms of the user-input query are replaced with a synonym, and the **constructed synonymic search query may effectively be performed such that each query is logically ORed (i.e., to determine if documents are found that satisfy any one of the queries).** For example, suppose a user inputs a search for "Class List Stanford" (as in the above-ample of FIG. 2), a synonymic search application may determine one or more synonyms for one or more of the words used in the user's query. For instance, the synonymic search application may determine that "division" is a synonym of "class", and may therefore construct a synonymic search query of "(Class OR Division) List Stanford", such that documents satisfying either "Class List Stanford" or "Division List Stanford" are found.

In Simske, a single search is performed using the synonymic search query by adding synonyms to the search and logically ORing the results together. Although one can argue that a logical ORing is equivalent to multiple queries, such logical ORing that the results be unioned. However, the present invention requires an intersection of the result sets of at least two distinct queries, and such action cannot be done through a logical ORing of the search result.

Hence, the Simske's search is performed using the synonymic search query by adding synonyms to the search. This is different from 1) receiving a first set of expanded results generated from one or more results of a first query concept by utilizing one or more data sources and then 2) receiving a second set of expanded results generated from one or more results of a second query concept by utilizing the one or more data sources.

The present system does not look for synonymous queries, and not does look for 'similar documents.' Rather, its goal is to find documents to explain a relationship - these 'new' documents are likely not to be very relevant to the input in the classical sense.

Since Simske fails to show at least one element in the independent claims, Simske cannot anticipate or render the claims obvious.

Additionally, Simske fails to show the claimed determining an intersection set of documents from the first and second sets of expanded results, wherein a relationship is determined between the first and second query concepts from the intersecting set of documents. The Office Action cites to Simske's paragraph 80 as follows:

[0080] In operational block 307, the results for the optimal search query(ies) are obtained from the one or more search engines used for performing the searches. It should be understood that potentially an enormous number of documents may be

returned for the query(ies) by the various search engines used. Further, some documents may be included in a plurality of the different search results returned. To better aid the user in identifying the likely best documents to review, the synonymic search application preferably weights the obtained results in operational block 308. That is, the synonymic search application preferably uses a weighting scheme to rank the documents in order of most likely relevant to the user's query to least likely relevant to the user's query. It should be understood that the ranking performed by the synonymic search application may combine the results for various different queries performed by various different search engines into a weighted list of documents. Further, it should be recognized that the documents being ranked by the synonymic search application may have already been ranked by the individual search engines used in performing the query(ies). Techniques for weighting the resulting documents that may be implemented by embodiments of the synonymic search application are described in greater detail below in conjunction with FIG. 7 below. Thereafter, a list of the resulting documents identified in order of the weighting of block 308 is presented to the user in operational block 309.

However, there is nothing in Simske that shows determining an intersection of documents. As discussed above, the ORing of the result is not the same as determining the intersection of documents. The act of weighting documents to rank documents does not correspond to determining an intersection set of documents in the first and second set of expanded search results. The claimed determining an intersection is used to find a set of documents common to the two sets expanded search results. In contrast, Simske ranks documents or positions documents on a scale in relation to others with a goal of finding similar search results. Simske starts with a single input query in contrast with the multiple query concepts required in the claims of the present invention. Further, Simske does not determine a common set of results or an intersection of two sets of search results.

Since Simske fails to show at least the element of determining an intersection in the independent claims, Simske cannot anticipate or render the claims obvious for this additional reason.

In sum, Simske cannot anticipate each independent claim as Simske fails to show each and every element recited in the independent claims.

Turning now to each element that has been moved back into its respective dependent claims, the Office Action also asserted that Simske's paragraph 78 teaches claim 6. Applicants respectfully traverse the rejection. Simske's paragraph 78 simply states:

[0078] Of course, if the synonymic queries used in constructing the synonymic search query are limited in number, then a technique is desired for selecting the optimal synonymic queries (e.g., the best synonyms for a particular term) to use For example, if 5 potential synonyms exist for a term of the user-input query, and only 3 synonymic queries are desired to be used for constructing the synonymic search query, a technique for determining the optimal 3 synonymic queries to use is desired. Accordingly, in certain embodiments of the present invention, the optimal synonymic queries to use may be determined in block 305 (shown in dashed line as being optional) of FIG. 3. For example, in certain implementations, the possible synonyms may be presented to the user and the user may select those to be used in constructing the synonymic search query. For instance, when the user sees certain synonyms it may aid the user in constructing a desired query (e.g., certain terms may jog the user's memory as to how best to search the topic of interest). Additionally or alternatively, the synonymic search application may be operable to autonomously weight the synonymic queries in the manner described more filly below in conjunction with FIG. 6 such that the optimal synonymic queries are more heavily weighted.

Thus, Simske simply teaches techniques for selecting optional synonymic queries, which is not done in the present invention and is completely different from the invention as discussed above.

Further, nowhere in Simske does it teach the specifics of generating expanded results by defining a first set of documents relevant to the first query concept, the first set of documents being a subset of a collection set of documents; building a first histogram of features from the first set of documents; and selecting features for an expanded feature set by comparing the first histogram of features with a second histogram of features from the collection set of documents.

The Office Action noted that selecting documents from their synonym set is the same as building a histogram. Applicant respectfully traverses the reason. Here, the histogram is used specifically as the mechanism for selecting the features to consider - so by plugging in someone else's method for this is by definition a different invention. In this case, the Examiner has improperly applied hindsight using the teachings of the present invention to reject the invention. Withdrawal of the rejection is requested

The Office Action also asserted that Simske shows claim 11's feedback scoring function applied to results generated from the expanded feature set. Applicants also traverse this rejection. Simske simply mentions that its "synonymic search application preferably weights the obtained results in operational block 308. That is, the synonymic

search application preferably uses a weighting scheme to rank the documents in order of most likely relevant to the user's query to least likely relevant to the user's query." However, there is no showing that Simske applies a feedback function based on features determined from the histogram. The use of weighting scheme for ranking does not correspond to the feedback scoring function and Simske fails to show this requirement. Withdrawal of the rejection is requested.

Additionally, the Office Action asserted Rui (USPN 6,859,802) teaches that the feedback scoring function assigns a fixed score to each feature and where feature is assigned different fixed scores (column 14, lines 46-67). Applicants respectfully traverse the assertion.

Rui relates to an improved image retrieval process based on relevance feedback uses a hierarchical (per-feature) approach in comparing images. Multiple query vectors are generated for an initial image by extracting multiple low-level features from the initial image. When determining how closely a particular image in an image collection matches the initial image, a distance is calculated between the query vectors and corresponding low-level feature vectors extracted from the particular image. Once these individual distances are calculated, they are combined to generate an overall distance that represents how closely the two images match. According to other aspects, relevancy feedback received regarding previously retrieved images is used during the query vector generation and the distance determination to influence which images are subsequently retrieved.

Rui's col. 14, lines 46-47 mentions generating a weighting of feature elements based at least in part on the feedback. However, nowhere in Rui does it show the specifics that the feedback scoring function assigns a fixed score to each feature and where feature can be assigned different fixed scores. Hence, Rui cannot render the claims obvious as it does not teach the claimed specifics. Additionally, Rui is in the art of image processing. One skilled in the art would not have combined Rui with Simske as the two would not be functional when combined as suggested by the Examiner. The combination of a search engine with an image processing software would not be operative. Withdrawal of the rejection on Simske and Rui is respectfully requested.

Even if Simske and Rui can be combined as suggested, they would not be capable of producing the results generated by the present invention, namely an explanation of how the queries are related. Hence, the combination is non-functional and one skilled in the art would not have combined them.

For the foregoing reasons, Simske cannot anticipate the independent claims. Additionally, neither Simske nor Rui can render any claims obvious. Further, the dependent claims are allowable as they depend from allowable independent claims and that Simske fails to show the specifics of the each dependent claim. Withdrawal of the rejections on all dependent claims is requested.

In view of the foregoing, Applicants respectfully submit that all claims are in condition for allowance. Withdrawal of the rejection is respectfully requested. If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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